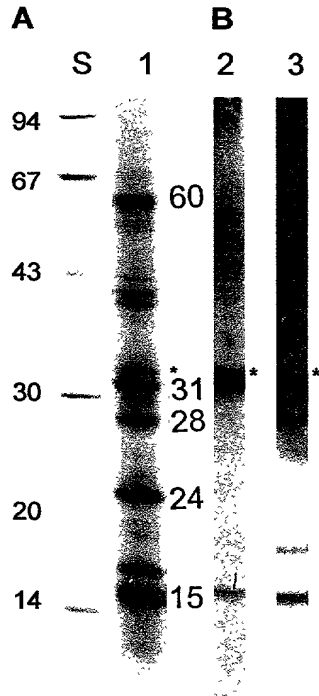


Appl No 09/864,291, Group Art Unit To Be Assigned
 Dkt No 1669 0050001/JAG/EEF/RGM, Batch No N/A
 Inventors OKO et al, Tel 202/371-2600
 Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 1



09864291-100901

Appl. No. 09/864,291; Group Art Unit: To Be Assigned
 Dkt No 1669.0050001/JAG/EEF/RGM; Batch No N/A
 Inventors: OKO et al; Tel: 202/371-2600
 Title: PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 2A

(SEQ ID NO:4)

1 CGGCACGAGGGCGGCAGGAGGGGGCCTG¹GGCAGG
 36 ATG GCA GTG AAC CAG AGC CAC ACC GAG AGC CGT CGT GGG GCC CTC ATC CCC TCT GGC GAA
 1 M A V N Q S H T E S R R G A L I P S G E
 96 AGT GTC TTG AAG CAG TGT GAG GAT GTG GAC CTC TGC TTC CTA CAG AAA CCA GTG GAA TCC
 21 S V L K Q C E D V D L C F L Q K P V E S
 156 TAT CTC TTT AAT GGC ACA AAG AAA GGA ACG TTG TTT CTC ACT TCA TAC CGG GTG GTC TTC
 41 Y L F N G T K K G T L F L ~~0~~T S Y R V V F
 216 GTG ACT TCA CAC TTA GTC AAT GAC CCC ATG CTT TCT TTT ATG ATG CCG TTT GGC CTG ATG
 61 V T S H L V N D P M L S F M M P F G L M
 276 AGT GAC TGC ACC ATT GAA CAA CCA ATT TTT GCC CCC AAC TAC ATT AAA GGA ACC ATT CAG
 81 S D C T I E Q P I F A P N Y I K G T I Q
 336 GCA GCT CCA GGT GGT GGC TGG GAA GGA CAA GCT GTT TTT AAG TTA TCC TTC AGG AAA GGA
 101 A A P G G G W E G Q A V F K L S F R K G
 396 GGT GCC ATC GAA TTT GCC CAA CTG ATG GTA AAA GCT GCC TCT GCT GCT GCC AGA GGA ATT
 121 G A I E F A Q L M V K A A S A A A R G I
 456 CCA CTT GGA AGT GTA AAT TAC TGG TTC GAC ACT TCA GGA CTG TAC ATA ATT ACT GTC CCA
 141 P L G S V N Y W F D T S G L Y I I T V P

1669.0050001

Appl. No. 09/864,291; Group Art Unit: To Be Assigned
 Dkt No 1669 0050001/JAG/EEF/RGM; Batch No. N/A
 Inventors OKO et al., Tel 202/371-2600
 Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 2B

516 GGG GCT GCA GTG TGC TCC TCA CAG ACA CCT TGT CCA GCA TAT CCA ATT GTG ATC TAT GGA
 161 G A A V C S S Q T P C P A Y P I V I {Y G
 576 CCC CCA CCA CCA GGA TAT ACA GTC CAA CCA GGG GAA TAT GGA ACT CCA CCA GAA GGA TAT
 181 P P P P G Y) T V Q P G E {Y G T P P E G) {Y
 A A A A
 636 GGA GCC CAA CCA GGG GGA TAT GGA GCC CCA CCT ATG GGA TAT GGA GCC CCG CCT GTG GGA
 201 G A Q P G G) {Y G A P P M G) {Y G A P P V G)
 696 TAT GGA GTC CCA CCT GGG GGA TAT GGA GTC CCA CCT GGG GGA TAT GGA GTC CCA CCT GGG
 221 {Y G V P P G G) {Y G V P P G G) {Y G V P P G
 756 GGA TAT GGA GCC CCA CCT GGG GGA TAT GGA GTC CCA CCT GGG GGA TAT GGT GCC CCA CCT
 241 G) {Y G A P P G G) {Y G V P P G G) {Y G A P P
 816 GGG GGA TAT GGA GCC CCA CCT GCA GGA TAT GGA GCC CCA CCA GCT GGA AAT GAA GCC CTA
 261 G G) {Y G A P P A G) {Y G A P P A G) ON E A L
 876 CCC CCT GCA TAT GAA GCT CCA TCT GCT GGA AAT ACA GCT GCC TCT CAC AGA TCT ATG ACA
 281 P P A Y E A P S A G N T A A S H R S M T
 A A A A
 936 GCT CAG CAG GAG ACT TCT CTT CCC ACT ACC TCA TCT TCT TAG
 301 A Q Q E T S L P T T S S S @
 GTCCATTTACCACTTCTCAGAGT⁴²TAAACCTTGAAGACTCACCAAGCAAAGGGCACCCCTAAACTGAAGTCACAGTAAGAAGG
 AAGACCCAGGTGCCAGTGGTAGGAGGTGTTCTGTGTCACGCAGTGGTCTGATCTTCTCCACACACCTGTGAGGTCTGTGCC
 TCAAAACAGATGAAGGTGAGAAGACGACTCCTGTTCTCAAGGAAGGAAGATGCTTGAAAACAGACTGCAAGCCAACTAGAGAG
 AGAGAGATGTGAAGTGGCACATAAAACAGCTTGGGGATGGAGACTGACTCTCTTTAGAAAACAGGCCTTCTCCCTGCCCTCTGA
 CCTGAGCAGAAAAGAGAAATCGCTGGAACCAAAGAGCTAGGGTCACCCCTGCTTAGACGCCCTCGATTAAAGCCTGCTTGCTGT
 TGCATAAAAAAAAAAAAAA(1413)

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FIG 3A

| | | | | | | | |
|------|--|-----|-----|-----|-----|---------|----------------|
| | 10 | 20 | 30 | 40 | 50 | 60 | |
| PT32 | MAVNQSHTESRRGALIPSGESVLKQCEDVDLCFLQKPVESYLFNGTKKGTLFLTYSRVVF | | | | | | |
| | :::..... :... . :::. . .::: . . ::: ::: | | | | | | |
| WBP2 | MALNKNHSEGG-GVIVNNTESILMSYDHVELTFNDMKNVPEAFKGTKKGTVYLTPYRVIF | | | | | | |
| | 10 | 20 | 30 | 40 | 50 | | |
| | 70 | 80 | 90 | 100 | 110 | 120 | |
| PT32 | VTSHLVNDPMLSFMMPFGLMSDCTIEQPIFAPNYIKGTIQAAPGGWEGQAVFKLSFRKG | | | | | | |
| |: : ::::: ::::: ::::: ..::: ..::: ..::: : | | | | | | |
| WBP2 | LSKG--KDAMQSFMMPFYLMKDCEIKQPVGANFIKGIVKAEGGWEGSASYKLTFTAG | | | | | | |
| | 60 | 70 | 80 | 90 | 100 | 110 | |
| | 130 | 140 | 150 | 160 | 170 | | |
| PT32 | GAIEFAQLMVKAASAAARG-IPLGSVNYWFDTSGLYIITVPGAAVCSSQTPC | | | | | ----313 | (SEQ ID NO:19) |
| | ::::: :..... :..: .: .: .: .: : ..: : : : : | | | | | | |
| WBP2 | GAIEFGQRMQLQVASQASRGEVPNGAYGYPYMPSGAYVFPPP---VANGMYPC | | | | | ----261 | (SEQ ID NO:17) |
| | 120 | 130 | 140 | 150 | 160 | | |

| | | | | | | |
|------|--|-------|-------|-------|-------|-------|
| | 10 | 20 | 30 | 40 | 50 | 60 |
| PT32 | MAVNQSHTESRRGALIPSGESVLKQCEDVLCFLQKPVESYLFNGTKKGTFLTYSYRVVF | | | | | |
| | | .. | : | : | | |
| WBPM | MAVNQNHTVDRRWAAIPHGESLLKKCEVDLSFPQSPPGSNLFSGTTKRGALFTSYRVIF | | | | | |
| | 10 | 20 | 30 | 40 | 50 | 60 |
| | 70 | 80 | 90 | 100 | 110 | 120 |
| PT32 | VTSHLVNDPMLSFMMPFGLMSDCTIEQPIFAPNYIKGTIQAAPGGGWEGQAVFKLSFRKG | | | | | |
| | | | | | | |
| WBPM | VTSRADNDPMFSFTMPFHLNNCTVEQPIFGANYIKGTIQAAPDGGWEGSATFKIVFRKG | | | | | |
| | 70 | 80 | 90 | 100 | 110 | 120 |
| | 130 | 140 | 150 | 160 | 170 | 180 |
| PT32 | GAIEFAQLMVKAASAAARGIPLGSVNYWFDTSGLYIITVPGAAVCSSQTPCPAYPIVIYG | | | | | |
| | | | | : | . | .. |
| WBPM | GAIDFAQLMAKAASAAQGVPLRVASFWMGPLGIYVIT--GDR--NMYAP-QAYQVA-YG | | | | | |
| | 130 | 140 | 150 | 160 | 170 | |
| | 190 | 200 | 210 | 220 | | |
| PT32 | PPPPGYTVQPGEYGTTPFEGYCAQPGGYGAPPMGYGAPPVGYGV-PPG----- | | | | | |
| | .. | .. | | | | |
| WBPM | APPAGYGASPVGYGVPSAGYGAPPAGYGAPPVGYVAPSPGYDVLPPGYGAVRYGSPPLY | | | | | |
| | 180 | 190 | 200 | 210 | 220 | 230 |
| | 230 | 240 | 250 | | 260 | |
| PT32 | -----GYGVPPGGYGVPFGGYGAPPGGYGVP-----PGGYGAPPGGYGAPP | | | | | |
| | | | | | | |
| WBPM | VATPMGYGVPPPGYGPPPVRYGSPPPGYEAPTMEYGAQPPRYGTTPMGSGSPPPRYEAPP | | | | | |
| | 240 | 250 | 260 | 270 | 280 | 290 |
| | 270 | 280 | 290 | 300 | 310 | |
| PT32 | AGYGAPPAGNEALPP-----AYEAPSAGMTAASHRSMTAQQ---ETSLPTSSS---- | | | | | |
| | | | | | | |
| WBPM | MGYGTTPSGRESIPPGSRATSVAQEAPPAGSEAGHPMSVAVQNPEFQASFPSTSSSQVHS | | | | | |
| | 300 | 310 | 320 | 330 | 340 | 350 |

PT32 ----- (SEQ ID NO:5)
WBPM PRSKM (SEQ ID NO:18)

FIG 4A

| | | | | | | |
|------|--|-----|-----|-----|-----|-----|
| | 200 | 210 | 220 | 230 | 240 | 250 |
| PT32 | TPPEGYCAQPGGYGAPPMGYGAPPVGYGVPPCGYGVPVPGGYGAPPGGYGVPPG .. ::::: : .::: : : ::::: ::::: ::::: ::::: ::::: | | | | | |
| WBPH | APPAGYGAQPVGNEGPPVGYRASPVRYGAPPLGYGAPPAGYCAPPLGYCAPPLGYGTPL 90 100 110 120 130 140 | | | | | |

```

      260       270       280       290       300       310
PT32 GYGAPPGGYGAPPAGYGAPAGNEALPPAYEAPSAGNTAASHRSMTAQQETSLPTTSSS
     ::::: ::::::: .:::. : : . :   ::: .. ..... 
WBPH GYGAPPLGYGAPPAGNEGPPAGYRASPAWGARPQUESTAA---QAPENASLPSASSS
          150         160        170        180        190
    
```

PT32 ----- (SEQ ID NO:9)

WBPH QDKEDDSGQPFLRKSAFQCLLECDYLIVR (SEQ ID NO:10)
200 210 220

Appl No 09/864,291; Group A1 Unit To Be Assigned
Dkt No 1669 0050001/JAG/EEF/RGM, Batch No. N/A
Inventors OKO et al., Tel 202/371-2600
Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
Cytoplasmic c-Yes, and Uses Thereof

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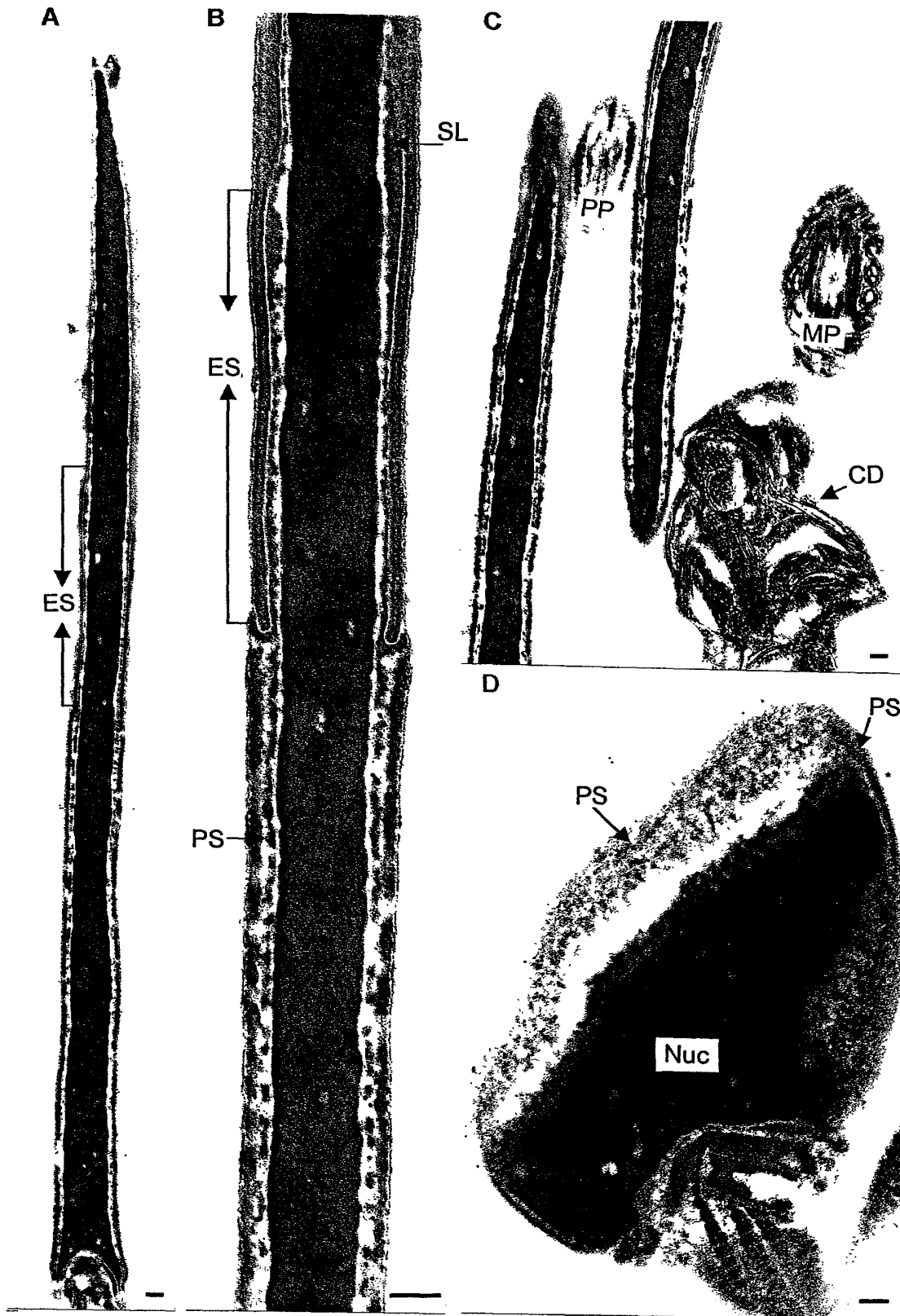
FIG 4B

1►
(SEQ ID NO:11) 1 ATGCCATTGATCTGATGACGAACCTCACTGTTGAACAACAGTATTTGCTGCAAACCTTC
(SEQ ID NO:12) 1 M P F D L M T N L T V E Q P V F A A N F
61 ATTAAGGGAACCTATTCAGGCAGCTCCATATGGTGGCTGGGAAGGACAAGCTACTTTTAAA
21 I K G T I Q A A P Y G G W E G Q A T F K
121 TTAGTCTTCAGAAATGGAGATGCCATTGAATTTGCCAGTTGATGGTGAAAGCTGCCTCT
41 L V F R N G D A I E F A Q L M V K A A S
181 GCTGTTGCCCGAGGATTTCCACTTAGAACCTTAAATGACTGGTTCAGCTCTATGGGAATT
61 A V A R G F P L R T L N D W F S S M G I
241 TATGTAATTACTGGGAAGGGAATATGTGCACTCCACAGATGCCTTGTTCAGTTATTGTC
81 Y V I T G E G N M C T P Q M P C S V I V
301 TATGGGGCCCCACCTGCAGGATATGGAGCCCCACCTCCCGGATACGGAGCCCCACCTGCA
101 [Y G A P P A G][Y G A P P P G][Y G A P P A
361 GGATATGGAGCCCAACCCGTAGGAAATGAAGGCCCGCTGTGGGATACAGAGCCTCACCT
121 G] Y G A Q P V G N E G P P V G Y R A S P
421 GTGCGATATGGAGCCCCACCTCTTGATACGGAGCCCCACCTGCAGGATATGGAGCCCCA
141 V R [Y G A P P L G][Y G A P P A G][Y G A P
481 CCTCTAGGATATGGAGCCCCACCTCTTGATATGGAACCCACCTCTCGGATATGGAGCC
161 P L G][Y G A P P L G][Y G T P P L G][Y G A
541 CCACCTCTCGGATATGGAGCCCCACCTGCAGGAAATGAAGGCCCGCTGCGGGATACAGA
181 P P L G][Y G A P P A G] N E G P P A G Y R
601 GCCTCACCTGCTGGATCAGGAGCCAGGCTCAGGAATCTACAGCAGCCAGGCTCCTGAA
201 A S P A G S G A R P Q E S T A A Q A P E
661 AACGAGGCTTCTCTCCCTCTGCCTCCTCTCTCAGGTCCATTCTTAACCTTCTAAGATG
221 N E A S L P S A S S S Q V H S ●●●
TAAACCTTGAAGACTACCAAGCAAAGAGGTACCCTAAAATTGAAGTCAGGATAAGGAGG
ACGACTCAGCTTAGAGTCATTGATTGATCTGCATTGTGAAAATTAGGAAACCAGATGCTC
CCATGTTCTCAAGGACGACCTTTCTTAAGGAAGTCAGTACGTGGGCAACAGTGATGAGAG
GAAGAGAGGAGAGACTCAACCACTAGAGCAGGGATAAGGTTTCCCTTGTTTCAGCTTTTC
AGTGTCTGCTGGAATGTGATGATTACCTCATTGTCAGGTAG-2

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FIG 5

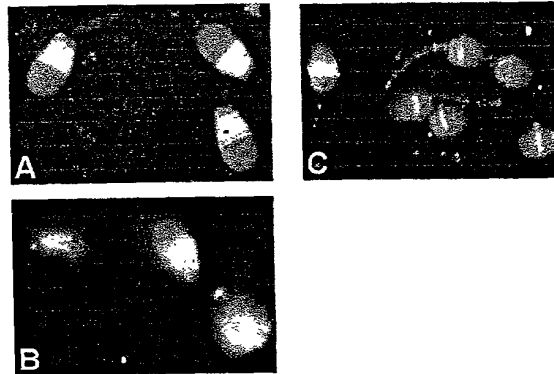


09864291.1.00901

Appl. No. 09/864,291; Group Art Unit. To Be Assigned
Dkt No 1669.0050001/JAG/EEI-RGM, Batch No N/A
Inventors: OKO et al.; Tel 202/371-2600
Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
Cytoplasmic c-Yes, and Uses Thereof

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FIG 6

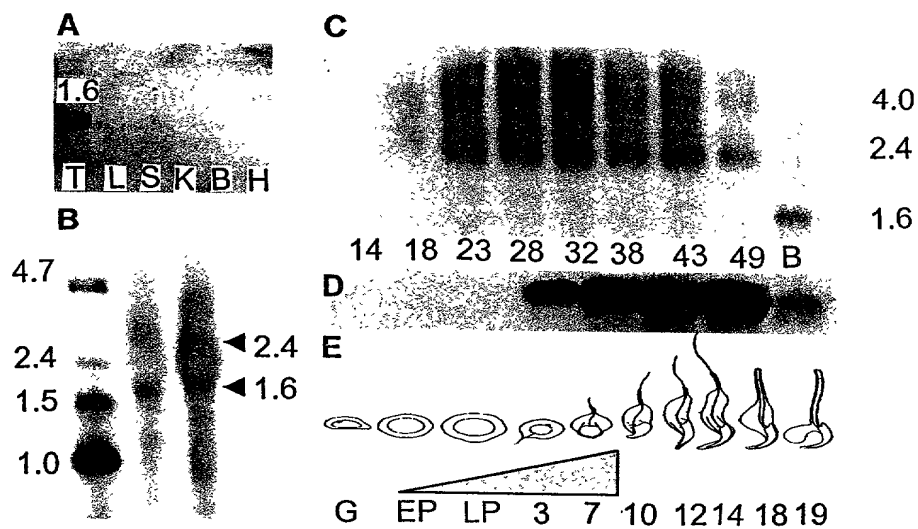


1669.0050001-PT32-9860

Appl. 09/864,291, Group A1 Unit To Be Assigned
 Dkt No. 1669 0050001/JAG/EEF/RGM, Batch No. N/A
 Inventors: OKO et al., Tel. 202/371-2600
 Title: P132 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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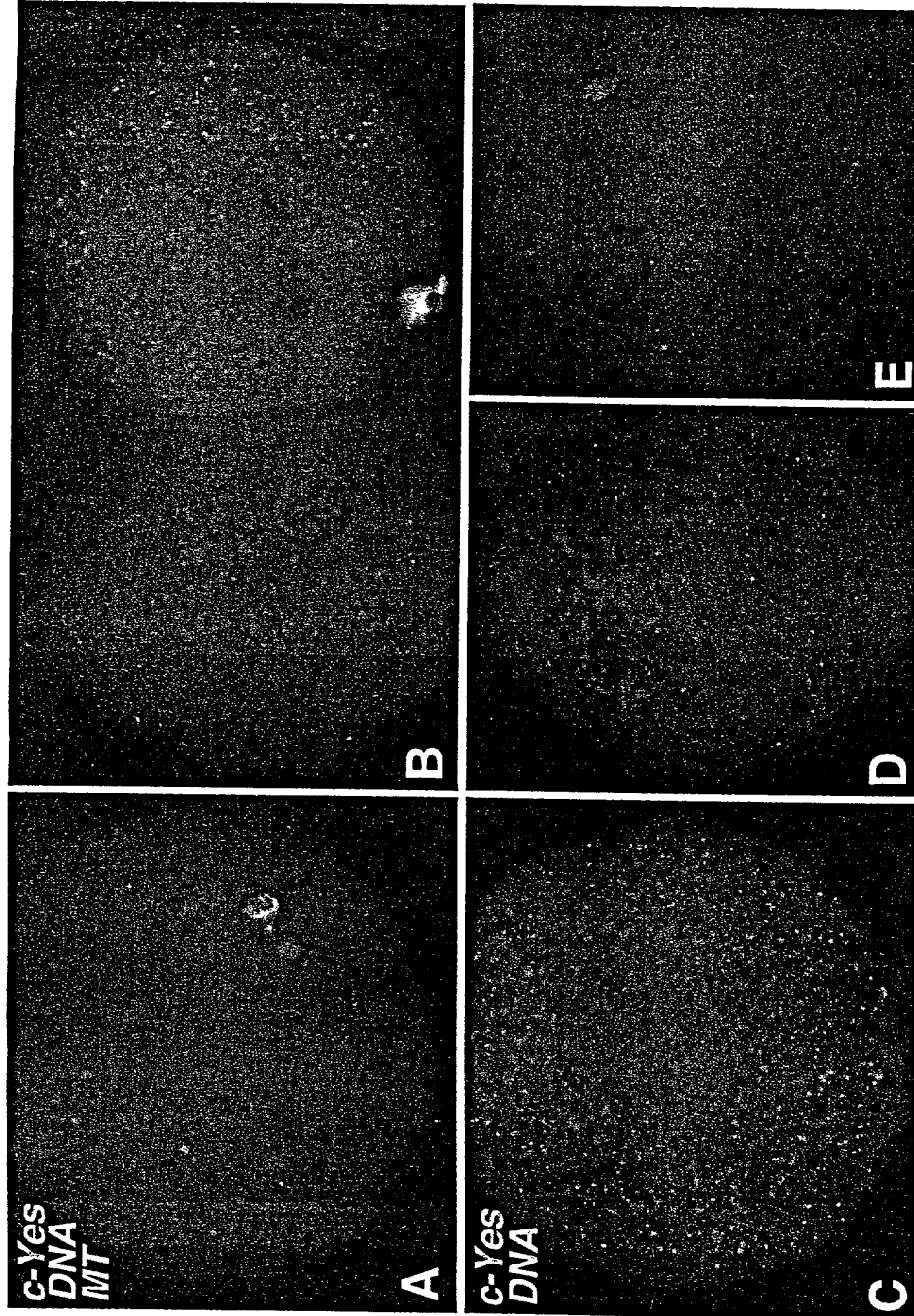
FIG 7



Appl. No. 09/864,291, Group Art Unit: *To Be Assigned*
 Dkt No 1669 0050001/LAG/EEF/RGM, Batch No. N/A
 Inventors: OKO et al. Tel 202/371-2600
 Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 8 - I

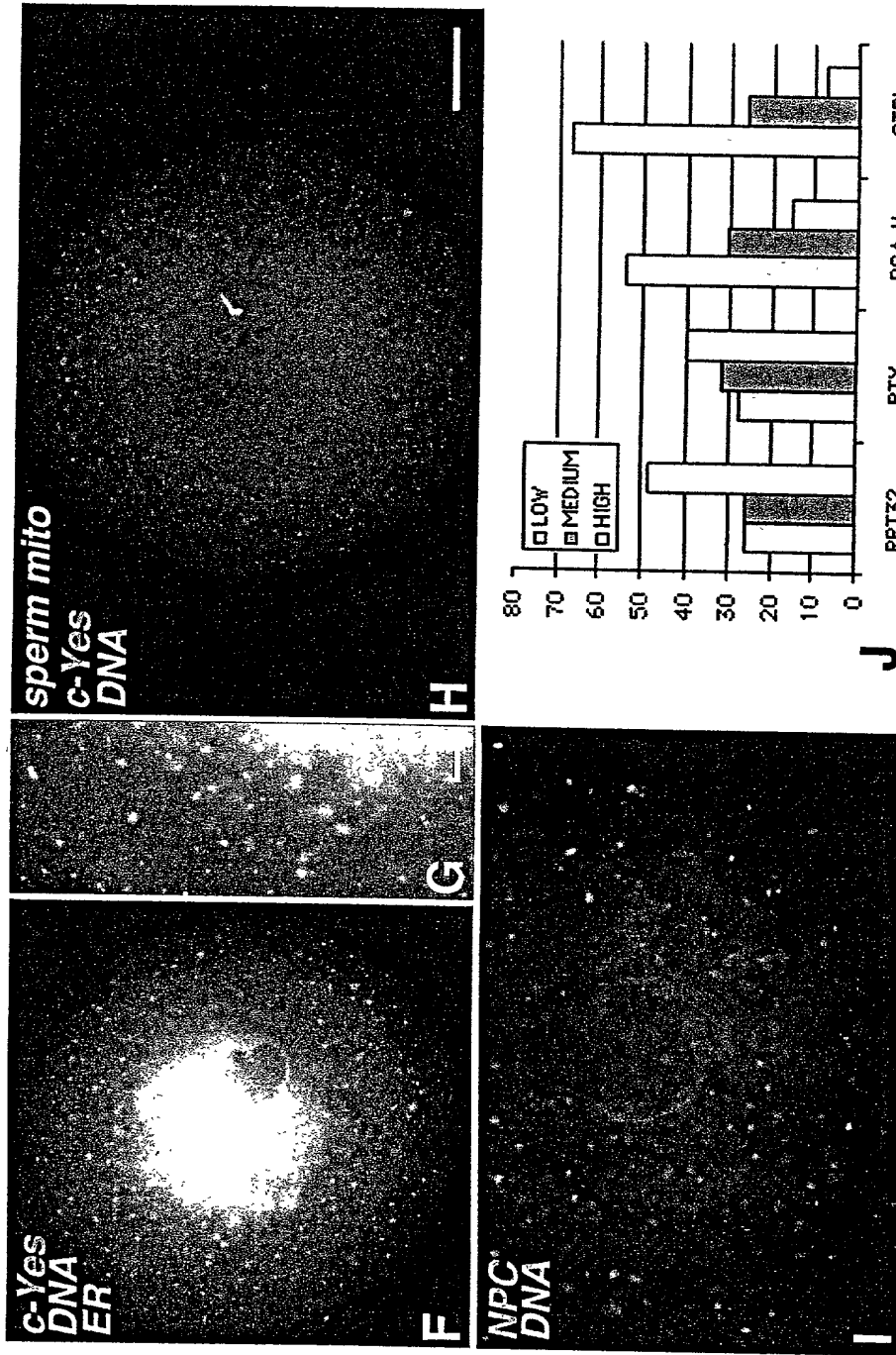


FOOTPRINT 16279860

Appl. No. 09/864,291, Group Art Unit: To Be Assigned
 Dkt No. 1669 0050001/JAG/EEF/RGM, Batch No. N/A
 Inventors OKO et al.; Tel 202/371-2600
 Title: PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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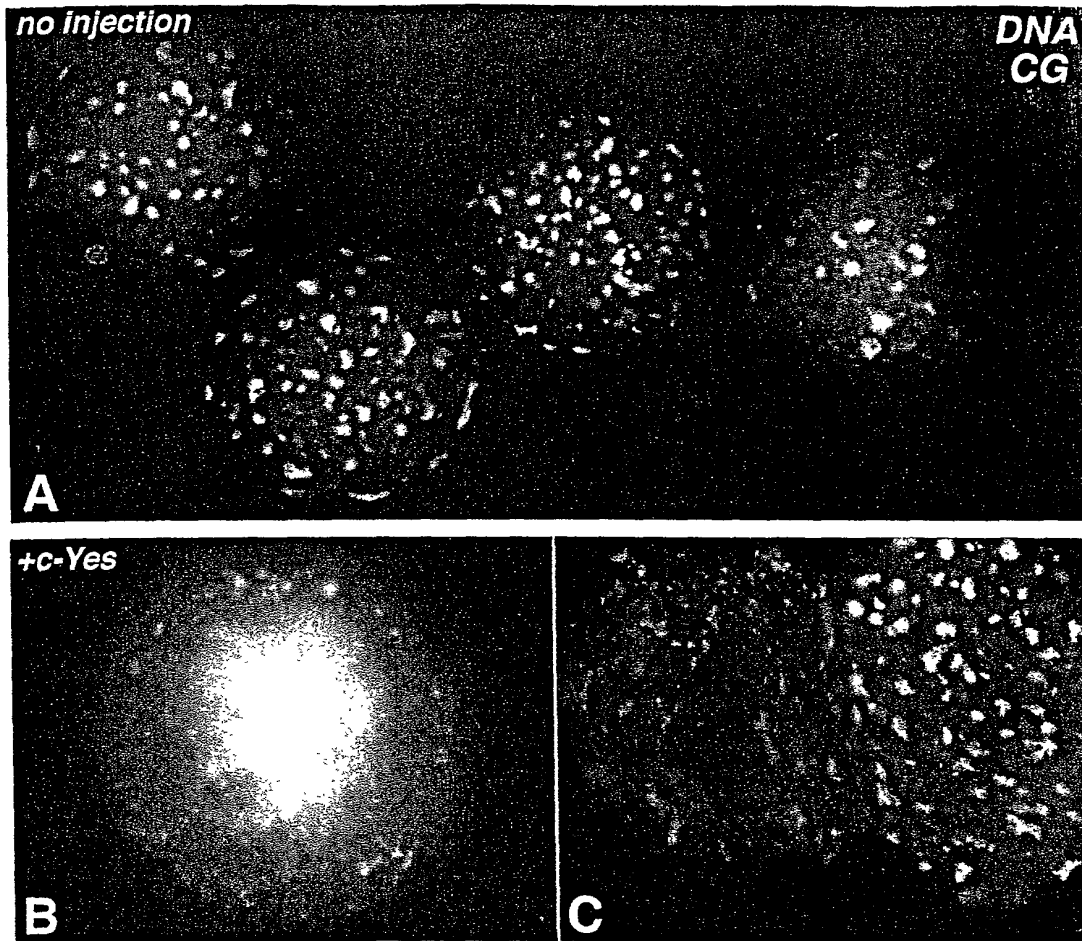
FIG 8 - II



Appl No 09/864,291, Group Art Unit. To Be Assigned
Dkt No 1669 0050001/JAG/EEF/RGM, Batch No N/A
Inventors OKO et al. Tel 202/371-2600
Title PF32 Sperm Protein, Sperm c-Yes, Oocyte
Cytoplasmic c-Yes, and Uses Thereof

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FIG 9 - I

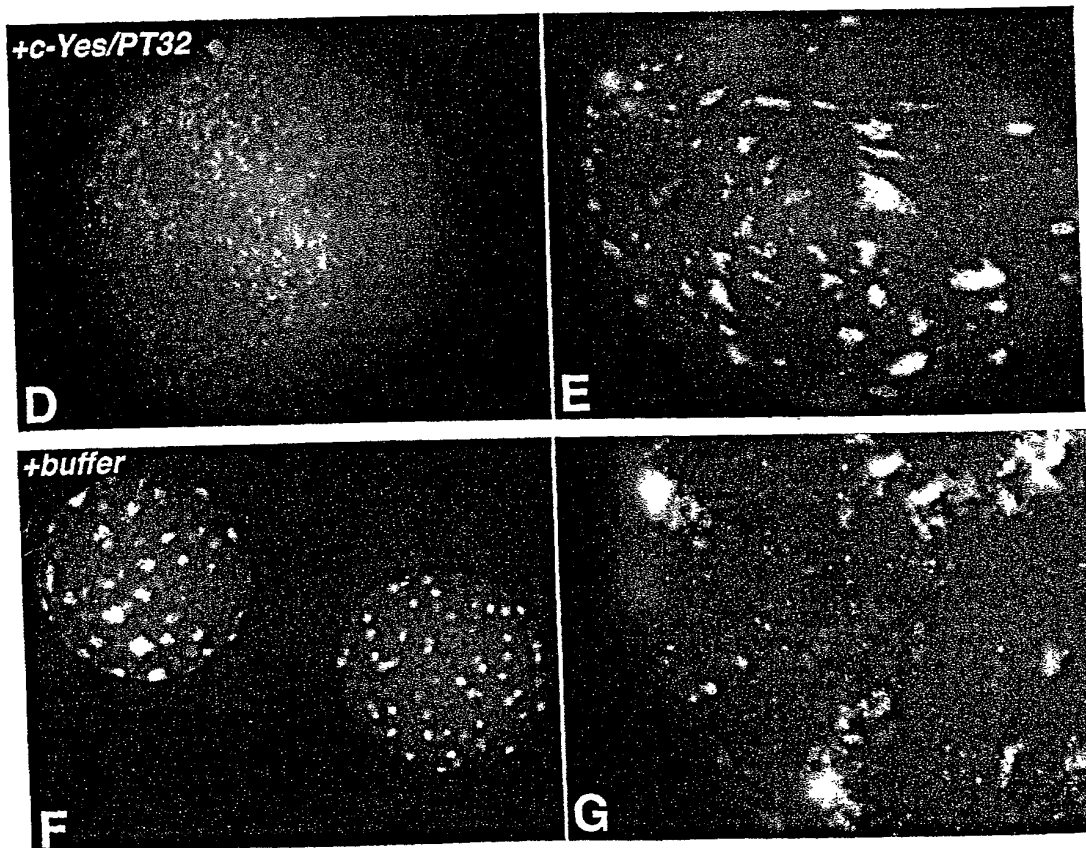


T0600T" T6249860

Appl. No. 09/864,291; Group Art Unit: To Be Assigned
 Dkt. No. 1669 0050001/JAG/EEF/RGM; Batch No. N/A
 Inventors OKO et al; Tel. 202/371-2600
 Title: PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 9 - II



1669 0050001

Appl. No. 09/864,291, Group Art Unit: To Be Assigned
 Dkt No 1669 0050001/LAG/EEF/RGM: Batch No N/A
 Inventors OKO et al; Tel 202/371-2600
 Title PT32 Sperm Protein, Sperm c-Yes, Oocyte
 Cytoplasmic c-Yes, and Uses Thereof

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FIG 10

1 mgclkskedk gpamkyrtnd tpepissvvs hygsdssqat qspaikgsav nfnshsmtpf
 61 ggpsgmtpfq gasssfsavp spypstltgg vtvfvalydy earttdlslf kkgerfqiin
 121 ntegdwwear siatgktgyi psnyvapads iqaeewyfgk mgrkdaerll lnpqnqrqif
 181 lvresettkg ayslsirdwd evrgdnvkhv kirkldnggy yittraqfes lqklvkhvye
 241 hadglchklt tvcptvkpqt qglakdawe1 preslrlevk lgqgcfgeww mgtwngttkv
 301 aiktikpgtm mpeaflqeaq imkklrhdkl vplyavvsee piyivtefmt kgslldfike
 361 gegkflklpq lvdmaaqiad gmayiermny ihrdlraani lvgdnlvcki adfglarlie
 421 dneytarqga kfpikwtape aalygrftik sdvwsfgill telvtkgrvp ypgmvnrevl
 481 eqvergyrmp cpqgcpeslh elmklcwkkd pderptfeyl qsfledyfta tepqyqpgdn
 541 1 (SEQ ID NO:20)

09864291-100901